

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

Claim 1 (original): A solenoid-operated safety valve device (1) for control of the supply of a flow of a fluid, such as a gas or a liquid, in particular water, to utiliser apparatus, comprising

a duct (3, 10, 10', 4) with an inlet (3) and an outlet (4) intended to be connected to a fluid source and to the utiliser apparatus, respectively, and in which are formed first and second valve seats (5, 6) in series with one another, each between a respective inlet chamber (8, 12) and an associated outlet duct (9, 13);

first and second interception solenoid valve devices (16, 17) associated with the first and second valve seat (5, 6) respectively, and each comprising a respective movable shutter (18; 28) cooperating with one of ~~the said~~said seats (5; 6); each interception solenoid valve device (16, 17) comprising an electromagnetic control portion (35, 50; 36, 50) which includes a respective movable core (35, 36) the position of which is controlled by a control winding (50); the solenoid-operated safety valve device being characterised in that the electromagnetic control portions (35, 50; 36, 50) of ~~the said~~said interception solenoid valve devices (16, 17) are disposed parallel to an intermediate portion (10) of ~~the said~~said duct (3, 10, 10', 4) lying between ~~the said~~said valve seats (5, 6) with the respective cores (35, 36) aligned and movable in opposite directional senses along a direction essentially parallel to the axis of ~~the said~~said intermediate portion of the duct (10), within a single winding or control coil (50).

Claim 2 (original): A solenoid-operated safety valve device according to Claim 1, in which

~~the first and second interception solenoid valve devices (18, 35, 37, 41, 50; 28, 36, 38, 42, 50) each comprise a respective~~each movable shutter (18; 28) is interposed between the associated inlet chamber (8; 12) and a pilot chamber (22; 32) which communicates with ~~the~~ said inlet chamber (8; 12) via a restricted passage (21, 31) and which can be put into communication with the associated outlet duct (9, 10; 13, 10') via a discharge passage (43; 44) controlled by a piloting solenoid valve (35, 37, 41, 50; 36, 38, 42, 50) which includes a shutter (37; 38) carried by a movable core (35, 36) the position of which is controlled by a control winding (50; 50);

~~the said~~said piloting solenoid valves (33, 37, 41, 50; 36, 38, 42, 50) being disposed parallel to an intermediate portion (10) of ~~the said~~said duct (3, 10, 10', 4) lying between ~~the~~ said valve seats (5, 6).

Claim 3 (original): A solenoid-operated safety valve device according to Claim 2, in which ~~the said~~said valve seats (5, 6) are orientated in a direction forming an angle, in particular of about 90°, with respect to the axial direction of ~~the said~~said intermediate duct portion (10).

Claim 4 (original): A solenoid-operated safety valve device according to Claim 2, in which the upstream valve seat (5) is orientated in a direction forming an angle, in particular of about 90°, with respect to the axial direction of ~~the said~~said intermediate duct portion (10), and

the downstream valve seat (6) is orientated in a direction substantially parallel to the axial direction of ~~the said~~said intermediate duct portion (10).

Claim 5 (original): A solenoid-operated safety valve device according to Claim 1, in which ~~the said~~said valve seats (5, 6) are orientated in directions substantially parallel to the axial direction of ~~the said~~said intermediate duct portion (10).

Claim 6 (original): A solenoid-operated safety valve according to Claim 2, in which ~~the said~~said valve seats (5, 6) are orientated in directions substantially parallel to the axial direction of ~~the said~~said intermediate duct portion (10).

Claim 7 (currently amended): A solenoid-operated safety valve device according to claim 3, in which the discharge passage (43) associated with the upstream piloting solenoid valve (35, 37, 41, 50) opens into ~~the said~~said intermediate duct portion (10).

Claim 8 (currently amended): A solenoid-operated safety valve device according to Claim 7, in which the discharge passage (44) associated with the downstream piloting solenoid valve (36, 38, 42, 50) opens into a second duct portion (10') which is transversely offset with respect to ~~the said~~said intermediate duct portion (10) and which communicates with the outlet connector (4).

Claim 9 (original): A solenoid-operated safety valve device according to Claim 8, in which ~~the said~~said second duct portion (10') has an inlet end alongside the outlet end of the

~~said~~said intermediate duct portion (10) and the discharge passage (44) associated with the downstream piloting solenoid valve (36, 38, 42, 50) opens into the inlet end of ~~the said~~said second duct portion (10') at a point geometrically upstream and hydraulically downstream of the outlet end of ~~the said~~said intermediate duct portion (10).

Claim 10 (currently amended): A solenoid-operated safety valve device according to Claim 4, in which the or each discharge passage (44'; 43', 44') controlled by the piloting solenoid valve (17; 16, 17) associated with a valve seat (6; 5, 6) orientated in an inclined direction with respect to the axial direction of ~~the said~~said intermediate duct portion (10) is formed through the shutter (28; 18, 28) correspondingly associated with the valve seat (6; 5, 6).

Claim 11 (currently amended): A solenoid-operated safety valve device according to Claim 1, wherein the shutters (18, 28) of the interception solenoid valve devices (16, 17) are connected to ~~the said~~said movable cores (35, 36).

Claim 12 (currently amended): A solenoid-operated safety valve device according to claim 1, wherein said intermediate duct portion (10) is obtained in a moulding operation, in an intermediate body (80) of plastic material overmoulded around ~~the said~~said control winding (50).

Claim 13 (currently amended): A solenoid-operated safety valve device according to Claim 11, wherein a ferromagnetic casing (71) made in one piece is associated with the control winding (50).

Claim 14 (currently amended): A solenoid-operated safety valve device according to claim 1, wherein to the inlet connector (3) there is associated a flow rate regulator (82) bayonet-fitted in a seat of said inlet connector (3).

Claim 15 (currently amended): A solenoid-operated safety valve device according to Claim 1, in which a tubular element (70) of ferromagnetic material within which ~~the said~~said cores (35, 36) are movably mounted extends into ~~the said~~said winding or coil (50), this tubular element (70) having an axial extent such that its ends are close to the cores (35, 36) in the de-excited condition of ~~the said~~said winding or coil (50).